

10 30 50
 GCACGAGCTGCCTCCCGCAGGCGCCACCTGTGTCCCCAGCGCCGCTCCACCCAGCAGGC
 70 90 110
 CTGAGCCCCTCTCTGCTGCCAGACACCCCTGCTGCCCACTCTCCTGCTGCTCGGGTTCT
 130 150 170
 GAGGCACAGCTTGTACACCGAGGCGGATTCTTTCTCTTTCTCTTTCTCTTCTGGCCC
 190 210 230
 ACAGCCGCAGCAATGGCGCTGAGTTCCTCTGCTGGAGTTCATCCTGCTAGCTGGGTTCCC
 250 270 290
 GAGCTGCCGGTCTGAGCCTGAGGCATGGAGCCTCCTGGAGACTGGGGGCCTCCTCCCTGG
 M E P P G D W G P P P W
 310 330 350
 AGATCCACCCCCAAAACCGACGTCTTGAGGCTGGTGCTGTATCTCACCTTCCTGGGAGCC
 R S T P K T D V L R L V L Y L T F L G A
 370 390 410
 CCCTGCTACGCCCCAGCTCTGCCGTCTGCAAGGAGGACGAGTACCCAGTGGGCTCCGAG
 P C Y A P A L P S C K E D E Y P V G S E
 430 450 470
 TGCTGCCCAAGTGCAGTCCAGGTTATCGTGTGAAGGAGGCTGCGGGGAGCTGACGGGC
 C C P K C S P G Y R V K E A C G E L T G
 490 510 530
 ACAGTGTGTGAACCCTGCCCTCCAGGCACCTACATTGCCACCTCAATGGCCTAAGCAAG
 T V C E P C P P G T Y I A H L N G L S K
 550 570 590
 TGTCTGCAGTGCCAAATGTGTGACCCAGCCATGGGCCTGCGCGGAGCCGGAAGTGTCC
 C L Q C Q M C D P A M G L R A S R N C S
 610 630 650
 AGGACAGAGAACGCCGTGTGTGGTTGCAGCCCAGGCCACTTCTGCATCGTCCAGGACGGG
 R T E N A V C G C S P G H F C I V Q D G
 670 690 710
 GACCACTGCGCCGCGTGCCGCGCTTACGCCACCTCCAGCCCGGGCCAGAGGGTGCAGAAG
 D H C A A C R A Y A T S S P G Q R V Q K
 730 750 770
 GGAGGCACCGAGAGTCAGGACACCTGTGTGCAAGTGTGCCCCCGGGACCTTCTCTCCC
 G G T E S Q D T L C Q N C P P G T F S P
 790 810 830
 AATGGGACCCTGGAGGAATGTCAGCACCAGACCAAGTGCAGCTGGCTGGTGACGAAGGCC
 N G T L E E C Q H Q T K C S W L V T K A
 850 870 890
 GGAGCTGGGACCAGCAGCTCCCACTGGGTATGGTGGTTTCTCTCAGGGAGCCTCGTCATC
 G A G T S S S H W V W W F L S G S L V I

FIG. 1A

```

      910              930              950
GTCATTGTTTGCTCCACAGTTGGCCTAATCATATGTGTGAAAAGAAGAAAGCCAAGGGGT
V  I  V  C  S  T  V  G  L  I  I  C  V  K  R  R  K  P  R  G
      970              990              1010
GATGTAGTCAAGGTGATCGTCTCCGTCCAGCGGAAAAGACAGGAGGCAGAAAGGTGAGGCC
D  V  V  K  V  I  V  S  V  Q  R  K  R  Q  E  A  E  G  E  A
      1030             1050             1070
ACAGTCATTGAGGCCCTGCAGGCCCTCCGGACGTCAACACGGTGGCCGTGGAGGAGACA
T  V  I  E  A  L  Q  A  P  P  D  V  T  T  V  A  V  E  E  T
      1090             1110             1130
ATACCCTCATTACGGGGAGGAGCCCAAACCACTGACCCACAGACTCTGCACCCCGACGC
I  P  S  F  T  G  R  S  P  N  H  *
      1150             1170             1190
CAGAGATACCTGGAGCGACGGCTGAATGAAAGAGGCTGTCCACCTGGCGGAACCAACCGGA
      1210             1230             1250
GCCCCGAGGCTTGGGGGCTCCACCCTGGACTGGCTTCCGTCTCCTCCAGTGGAGGGAGAG
      1270             1290             1310
GTGGCGCCCCTGCTGGGGTAGAGCTGGGGACGCCACGTGCCATTCCCATGGGCCAGTGAG
      1330             1350             1370
GGCCTGGGGCCTCTGTTCTGCTGTGGCCTGAGCTCCCCAGAGTCCTGAGGAGGAGCGCCA
      1390             1410             1430
GTTGCCCCTCGCTCACAGACCACACACCCAGCCCTCCTGGGCCAACCCAGAGGGCCTTCA
      1450             1470             1490
GACCCAGCTGTGTGCGCGTCTGACTCTTGTGGCCTCAGCAGGACAGGCCCGGGCACTG
      1510             1530             1550
CCTCACAGCCAAGGCTGGACTGGGTTGGCTGCAGTGTGGTGTTTAGTGGATACCACATCG
      1570             1590             1610
GAAGTGATTTTCTAAATTGGATTTGAATTCGGCTCCTGTTTTCTATTTGTCATGAAACAG
      1630             1650             1670
TGTATTTGGGGAGATGCTGTGGGAGGATGTAAATATCTTGTTTCTCCTCAAAAAAAAAA
      1690
AAAAAAAAAAAAAAAAAAAAAAAAA

```

FIG.1B

1	MEPPGDWGPPPWRSTPKTDVLRVLVLTFLGAPCYAPALPSCKEDEYPVG	50
: . :. :. . . . :. : :	
1MVSLPRLCALWGCLLTAVHLGQCVTCSDKQYLHD	34
51	SECCPKCSPGYRVKEACGELTGTVCPECPPGTYIAHLNGLSKCLQCQMCD	100
	: : . : : : : . :	
35	GQCCDLCQPGSRLTSHCTALEKTQCHPCDSGEFSAQWNREIRCHQHRHCE	84
101	PAMGLRASRNCSTENAVCGCSPGHFCIVQGDGHCAACRAYATSSPGQRV	150
	. . : : . . . : . . : . . . : : :	
85	PNQGLRVKKEGTAESDTVCTCKEGQHCTSKD...CEACAQHTPCIPGFGV	131
151	QKGGTESQDTLCQNCPPGTFSPNGTL.EECQHQT KC.SWLVTKAGAGTSS	198
	. : . : : . . : : . .	
132	MEMATETTDTVCHPCPCGFFSNQSSLFEKCYPNTSCEDKNLEVLQKGTSQ	181
199	SH.....WVWFLSGSLVIVIVCSTVGLIICVKR..RKPRGDVVKVIV	239
	. : : : : : : : : : : . . . : : : : : : : : : . .	
182	TNVICGLKSRMRALLVIPVVMGILITIFGVFLYIKKVVKPKDNEMLPPA	231
240	SVQRKRQEAEG.....EATVIEALQAPPDVTTVAVEETIPSFTGRSPNH	283
 : . . . : : . .	
232	ARRQDPQEMEDYPGHNTAAPVQETLHGCQPVTQEDGKESRISVQERQVTD	281

FIG.2

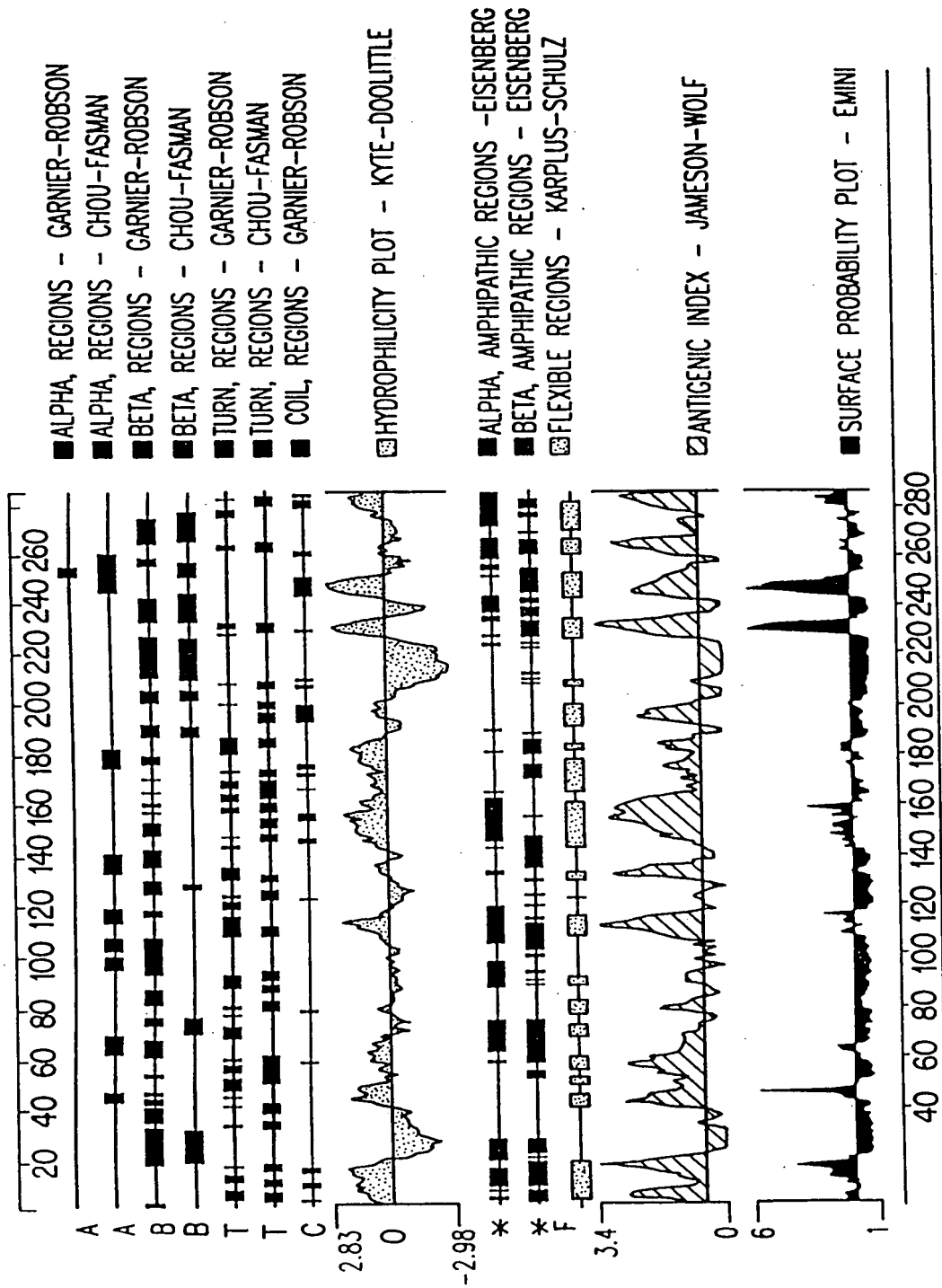


FIG. 3

```

      10              30              50
CCCCCTTCTACAGGAAACCCGGAGTGGACTGGAACGGTGCAGGGGGAGAACTCGCCCCTC
      70              90              110
CCATCGGGGCGCTCCTTCATACCGGCCCTTCCCTCGGCTTTGCCTGGACAGCTCCTGCC
      130             150             170
TCAGGCAGCGCCACCTGTGTCGCCCAGCGCGCTCCACCCAGCAGGCCTGAGCCCCTCTC
      190             210             230
TGCTGCCAGACACCCCCTGCTGCCCACTACTCCTGCTGCTCGGGTTCTGAGGCACAGCTT
      250             270             290
GTCACACCGAGGCGGATTCTCTTTCTCTTTCTCTTTCTCTTCTGGCCCACAGCCGCAGCA
      310             330             350
ATGGCGCTGAGTTCCTCTGCTGGAGTTCATCCTGCTAGCTGGGTTCCCGAGCTGCCGGTC
      370             390             410
TGAGCCTGAGTCATGGAGCCTCCTGGAGACTGGGGGCCTCCTCCCTGGAGATCCACCCCC
      M E P P G D W G P P P W R S T P
      430             450             470
AGAACCGACGTCTTGAGGCTGGTGTGTATCTCACCTTCCTGGGAGCCCCCTGCTACGCC
      R T D V L R L V L Y L T F L G A P C Y A
      490             510             530
CCAGCTCTGCCGTCTTGCAAGGAGGACGAGTACCCAGTGGGCTCCGAGTGCTGCCCAAG
      P A L P S C K E D E Y P V G S E C C P K
      550             570             590
TGCAGTCCAGGTTATCGTGTGAAGGAGGCCTGCGGGGAGCTGACGGGCACAGTGTGTGAA
      C S P G Y R V K E A C G E L T G T V C E
      610             630             650
CCCTGCCCTCCAGGCACCTACATTGCCACCTCAATGGCCTAAGCAAGTGTCTGCAGTGC
      P C P P G T Y I A H L N G L S K C L Q C
      670             690             710
CAAATGTGTGACCCAGATATTGGTTCCCCCTGTGACCTCAGGGGAAGAGGTACCTGGAG
      Q M C D P D I G S P C D L R G R G H L E
      730             750             770
GCTGGTGCCACCTGAGTCCAGGCAGACAGAAAGGGGAACCAGACCCAGAGGTGGCCTTT
      A G A H L S P G R Q K G E P D P E V A F
      790             810             830
GAGTCACTGAGCGCAGAGCCTGTCCATGCGGCCAACGGCTCTGTCCCCTTGGAGCCTCAT
      E S L S A E P V H A A N G S V P L E P H
      850             870             890
GCCAGGCTCAGCATGGCCAGTGCTCCCTGCGGCCAGGCAGGACTGCACCTGCGGGACAGG
      A R L S M A S A P C G Q A G L H L R D R
      910             930             950
GCTGACGGCACACCTGGGGGCAGGGCCTGAGCCTACAGGGAGGCACAGGGCAGGTGGGCT
      A D G T P G G R A *

```

FIG.4A

970	990	1010
AGCCATGAACAGAAGAGGAAGCTGGAGTGCTTTGGGGGTTTCATGCATGTAGGCTGGGATT		
1030	1050	1070
TGGGGCTCACACCTCAACCTGCATGCCAGTTCCATGCCCCCTCCCCTCTTGTGAAAGCAC		
1090	1110	1130
CTGTCTACTTGGGCTGAGGATGTGGGGGCACAGGTGGCAGGTGAGGCTGCCCTCAGGAGG		
1150	1170	1190
GGCCCAGGCCAGCTTGTACCCACCTCCACCAGTACCTGAAGAAGTGGGGCTCTCACCC		
1210	1230	1250
TACCTGCCTCTGCCATTGGAATGGCCTGGTTTGCACAGATGGGAAACCCGTTTGAGGGGT		
1270	1290	1310
GGGTGTCTGGGTGGGCACGTGGGGCGAGGACCTGCCTGAGGGACCCTGCCCTGGAAGTGA		
1330	1350	1370
CAGTGCAAGCTCGGCGTCTGCCATCTGGGCAGAAGGCTGGTTTCTCCCATCAACGAAG		
1390	1410	1430
CCCTCCAGGACCTTCCTGCAAGCCCTCGTCCCACACGCAGCTCTGCCGTCCCTTGGTGT		
1450	1470	1490
CCCTCCCGGCCTCAGGTCCTCCATGCTGGGTACCTCTGGGCACCTCGTTTGGCTGAGCCA		
1510	1530	1550
GGGGTTCAGCCTGGCAGGGCGCCCTGGCAGCAGTCCTTGGCCTGTGGATGCTGTCCTGGC		
1570	1590	1610
CTGTGGATGGTGTCCCGCCCTCCACGTACCCCTCTCACCCCTCCTCTTGGACTCCAGCC		
1630	1650	1670
ATGGGCCTGCGCGGAGCCGGAAGTCTCCAGGACAGAGAACGCCGTGTGTGGCTGCAGC		
1690	1710	1730
CCAGGCCACTTCTGCATCGTCCAGGACGGGGACCACTGCGCCGCGTGCCGCGCTTACGCC		
1750	1770	1790
ACCTCCAGCCCCGGGCCAGAGGGTGCAGAAGGGAGGCACCGAGAGTCAGGACACCCTGTGT		
1810	1830	1850
CAGAACTGCCCCCGGGGACCTTCTCTCCAATGGGACCCTGGAGGAATGTCAGCACCAG		
1870	1890	1910
ACCAATTGGCCTAATCATATGTGTGAAAAGAAGAAAGCCAAGGGGTGAGCACACGGTGGC		
1930	1950	1970
CCCATCAGGGTTCATGTCCCCAGCCGTACCTCTTGGAGCTCTGTACCCCAAGCCTGGG		
1990	2010	2030
AGGTGGCCCCAGAGCTTTTCCAGGATCCGCGGCTCCTCCAGGGCAGCCACTGCAGGCTG		
2050	2070	2090
GGGCAGGTGTATGTAGTCAAGGTGATCGTCTCCGTCCAGCGGTAAAAGACAGGAGGCAGA		
2110	2130	2150
AGGTGAGGCCACAGTCATTGAGCCCTGCAGGCCCTCCGGACGTCACCACGGTGGCCGTG		
2170	2190	2210
GAGGAGACAATACCCTCATTCACGGGGAGGAGCCCAAACCACTGACCCACAGACTCTGCA		

FIG.4B

```

      2230              2250              2270
CCCCGACGCCAGAGATACCTGGAGAGACGGCTGCTGATAGAGGCTGTCCACCTGGCGAAA
      2290              2310              2330
CCACCGGAGCCCGGAGGCTTGGGGGCTCCGCCCTGGGCTGGTTTCCGTCTCCTCCAGTGG
      2350              2370              2390
AGGGAGAGGTGGTGCCCCTGCTGGTGGTAGAGCTGGGGACGCCACGTGCCATTCCCATGG
      2410              2430              2450
TTCAGTGAGGGGCTGGTGGCCTCTGTTCTGCTGTGGCCTGAGCTCCCCAGAGTCCTGAGG
      2470              2490              2510
AGGAGCCCCAGTTGCCCTCGCTCACAGACCACACCCCAGCCCTCCTGGGCCAACCCAG
      2530              2550              2570
AGGCCCTTCAGACCCCAGCTGTCTGCGCGTCTGACTCTTGTGGCCTCAGCAGGACAGGC
      2590              2610              2630
CCCGGGCACTGCCTCACAGCCAAGGCTGGAATGGGTTGGCTGCAGTGTGGTGTTTAGTGG
      2650              2670              2690
ATACCACATCGGAAGTGATTTTCTAAAAATTGGATTTGAATTCGGAAAAAAA
```

FIG.4C

1	MEPPGDWGPPPWRSTPRTDVLRVLVLTFLGAPCYAPALPSCKEDEY..P	48
	. .: ::: . :... . :. . : :. :. : .	
1	MAPVAVWAALAVGLELWAAHALPAQVAF..TPYAPEPGSTCRLREYYDQ	48
49	VGSECCPKCSPGYRVKEACGELTGTVCEPCPPGTYIAHLNGLSKCLQCQM	98
	.: . :. .. :. : ..: .. : :.. .	
49	TAQMCCSKCSPGQHAQVFCTKTSDTVCDSCEDSTYTQLWNWVPECLSCGS	98
99	..CDPDIGSPCDLRGRGHL.....EAGAHLSRGRQKGEPDPE	133
	:..... : : : : : : : : .: : : . . : :	
99	RCSSDQVETQACTREQNRICTCRPGWYCALSKQEGCRLCAPLRKCRPGFG	148
134	VA.....FESLSAEPVHAANGS	150
	:.: .: .:.	
149	VARPGTETSDVVCKPCAPGTFSNTTSSTDICRPHQICNVVAIPGNASMDA	198
151	VPLEPHARLSMASAPC..GQAGLHLRDRADGTPGGRA.....	185
	. . . : . :. : . . : : : : : . . .	
199	VCTSTSPTRSMAPGAVHLPQPVSTRSQHTQPTPEPSTAPSTSFLLPMGPS	248

FIG.5

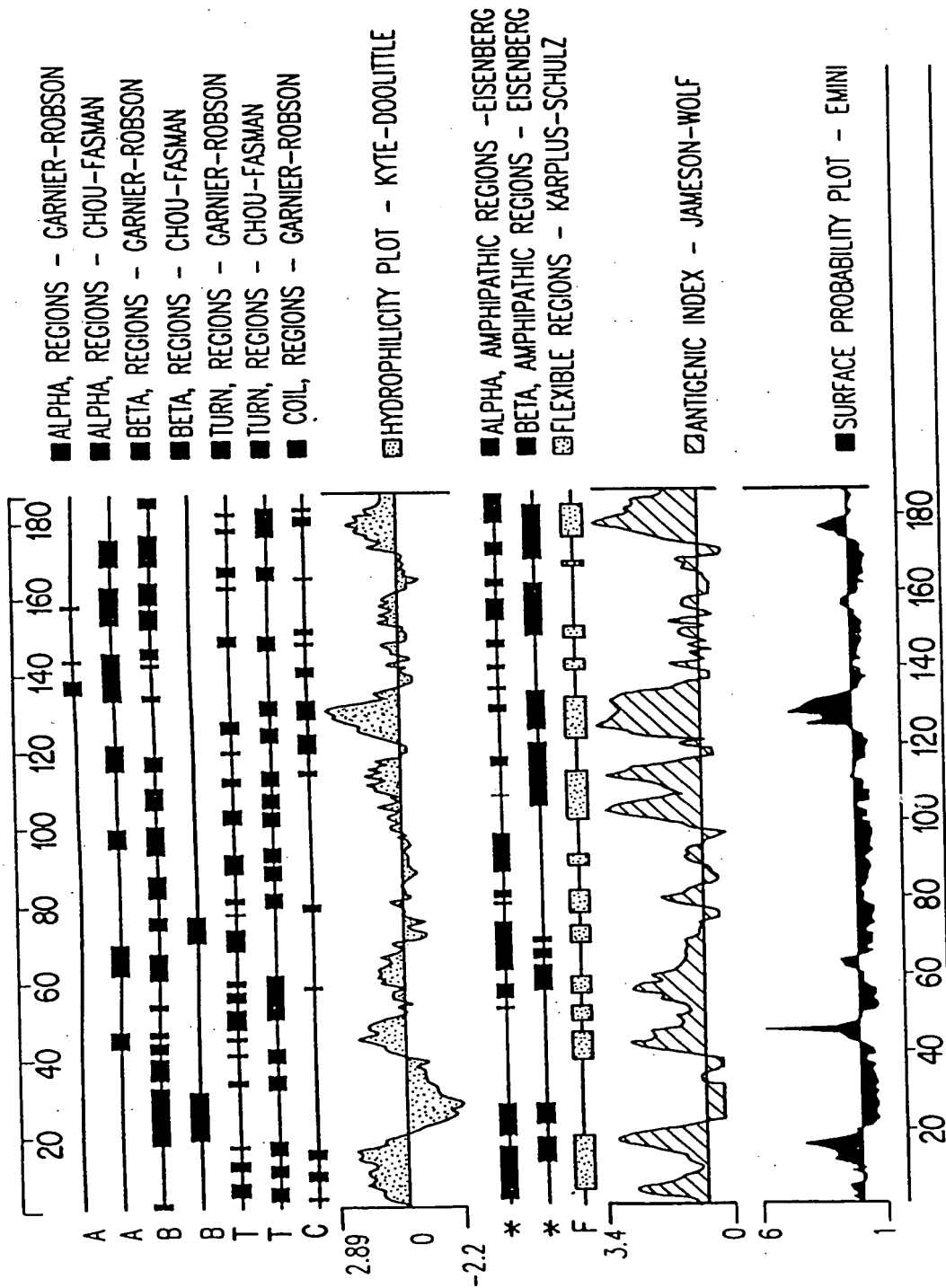


FIG. 6

```

      10              30              50
AAAGCTCGGGCTCCACCGGGGACGACCGCTCCTAGAACTGAGTGGTATCCCCCGGGCCT
      70              90              110
GCAGGAATTCCAACCTGCCTGAAGGGACCCTGCCCTGGAAGTACAGTGAAGCTCGGCG
      130             150             170
TCCTGCCCATCTGGGAAGAAGGCTGGTTTCTCCCATCAACGAAGCCCTCCAGGACCTTC
      190             210             230
CTGCAAGCCCTCGTCCCACACGCAGCTCTGCCGTCCCTTGGTGTCCCTCCCGGCCTCAGG
      250             270             290
TCCTCCATGCTGGGTACCTCTGGGCACCTCGTTTGGCTGAGCCAGGGGTTACAGCTGGCA
      M L G T S G H L V W L S Q G F S L A
      310             330             350
GGGCGCCCTGGCAGCAGTCCTTGGCCTGTGGATGCTGTCTGGCCTGTGGATGGTGTCCC
      G R P G S S P W P V D A V L A C G W C P
      370             390             410
GGCCTCCACGTACCCCTCTCAGCCCCTCCTCTTGGACTCCAGCCATGGGCCTGCGCGCG
      G L H V P P L S P S S W T P A M G L R A
      430             450             470
AGCCGGAAGTGTCTCCAGGACAGAGAACGCCGTGTGTGGCTGCAGCCCAGGCCACTTCTGC
      S R N C S R T E N A V C G C S P G H F C
      490             510             530
ATCGTCCAGGACGGGGACCACTGCGCCGCGTGCCGCGCTTACGCCACCTCCAGCCCGGGC
      I V Q D G D H C A A C R A Y A T S S P G
      550             570             590
CAGAGGGTGCAGAAGGGAGGCACCGAGAGTCAGGACACCCTGTGTCAGAACTGCCCCCGG
      Q R V Q K G G T E S Q D T L C Q N C P R
      610             630             650
GGACCTTCTCTCCCAATGGGACCCTGGAGGAATGTCAGCACCAGACCAAGTAAGTGAACC
      G P S L P M G P W R N V S T R P S K *
      670             690             710
CGGGGGAGGCCAGCTCTGTGCCCTGGGGAGGGGGCTCCACGTTGCTTCCCTGGGAGATGA
      730             750             770
CCGTCTTCTCCAGCAGAAAGGTTGAAGGTCCACCCCTGAGCGGCACCCTGGTCACATGCC
      790             810             830
TGCGTCCAGGAGAGCTGCAGGGTGAAGCCTGTGTGCCCCAGATAACCCCTTCCATGGGCC
      850             870             890
CAGACAAAGCCTCATCAGATCTGAGCTTCTGGAGGCTCAGGATGGGCCTTCCAGAAGC
      910             930             950
AGGCCCAGAGGGAGGCTGCCTCCAGATCCCCTGTCCCCTGGGGCTGTGGGTGTCCCTGAA
      970             990             1010
TGTCAGGGCCATGGGAGGGCCCCCTGGGCTTCAGGGGTTGGGGAAAGTGAACACTCTGCTC

```

FIG. 7A

1030	1050	1070
TTTGTCCACCTTCGGGAGGACAACCTTCAAATGCTGACCCTGGGCCCCTAACTGACCTGA		
1090	1110	1130
GACTTCAGAGCTTCTTGGGAGGAGCTGGGGTCCCCAGCGGAGCCTGGGATGGAGCAGGG		
1150	1170	1190
ATGGCTGCCCCAGGGAGGGGGCGGTGGGGCCTTCCATCCTGCTCTGCCCTCCTCGTCCTC		
1210	1230	1250
TGGCCCCAGCTCAGTCCTGTCCATCTCCAGCTCTAACCATTGTGGCCCGACACTGGCTC		
1270	1290	1310
TCCCTCTACCTTCTGTCCTTGTCTGACACTGGTCTCCCGTGCTCTGGGGTCTCTGCACTG		
1330	1350	1370
ATGGCTGCCTCCCGCTTCTCTCCCCTCTCCCTCTGCCGTCTGTCTCCTGTGGCCAGTCT		
1390	1410	1430
CTCCTTGTTTCTTCTCCTCCTTCTCTCCACCTCCCCATAGCCGAGCTTGAAAA		
1450	1470	1490
GTCAGACAGACCTCTGAGGTCTCATCTGGAGCTGCCACCAGCCCAGCCTCCCTGGGACC		
1510	1530	1550
TGTCTTCACTGCCTGGGGCCCTGGGAGCCAGGGAGGCTCCCTGAGGCTGAGTGAACACTG		
1570	1590	1610
GGCGCTGCACCTGCCTCTCCACGTCTCGGCCCACTCCCGCAGGTGCAGCTGGCTGGT		
1630	1650	1670
GACGAAGCCCGGAGCTGGGACCAGCAGCTCCCACTGGGTATGGTGGTTTCTCTCAGGGAG		
1690	1710	1730
CCTCGTCATCGTCATTGTTTGCTCCACAGTTGGCCTAATCATATGTGTGAAAAGAAGAAA		
1750	1770	1790
GCCAAGGGGTGATGTAGTCAAGGTGATCGTCTCCGTCCAGGTATTGATCCTCCTCCCCCT		
1810	1830	1850
CTCCCTCCCCCTCCACCTTCCACCTCCCCTCTCCCCGCTGGGGCTGGTGTTTCTGGTG		
1870	1890	1910
TACATGGTGGGGGCTCCAGTTCTCTGAGGGTCTGAGTCTTTCAAGTACAGCCACGGTA		
1930	1950	1970
GCTCAGGAAAGAACCCACCCCCTCAAAGTCAAAGCAGTAAAATGAACCCGAGAACCTGGA		
1990	2010	2030
GTCCCAGGGGGGCTGAGCAGGCAGGGTCTCCACGATTCTGTGTGCTCACAGCGGGAAAAAG		
2050	2070	2090
ACAGGAGGCAGAAGGTGAGGCCACAGTCATTGAGGCCCTGCAGGCCCTCCGGACGTCAC		
2110	2130	2150
CACGGTGGCCGTGGAGGAGACAATACCCTCATTCACGGGGGAGGAGCCCAACCACTGAC		
2170	2190	2210
CCACAGACTCTGCACCCCGACGCCAGAGATACCTGGAGCGACGGCTGCTGAAAGAGGCTG		
2230	2250	2270
TCCACCTGGCGAAACCACCGGAGCCCGAGGTTTGGGGGCTCCGCCCTGGGCTGGTTTCC		

FIG.7B

2290	2310	2330
GTCTCCTCCAGTGGAGGGAGAGGTGGGGCCCTGCTGGGGTAGAGCTGGGGACGCCACGT		
2350	2370	2390
GCCATTCCCATGGGCCAGTGAGGGCCTGGGGCCTCTGTTCTGCTGTGGCCTGAGCTCCCC		
2410	2430	2450
AGAGTCCTGAGGAGGAGCGCCAGTTGCCCTCGCTCACAGACCACACACCCAGCCCTCCT		
2470	2490	2510
GGGTCCAGCCCAGAGGGCCCTTCAGACCCCAGCTGTCTGCGCGTCTGACTCTTGTGGCCT		
2530	2550	2570
CAGCAGGACAGGCCCCGGGCACTGCCTTCAAGCCAAGGCTGGACTGGGTGGCTGCAGTG		
2590	2610	2630
TGGTGTTTAGTGGATAACCACATCGGAAGTGATTTTCTAAATTGGATTGAAAAAAAAA		

FIG.7C

FIG. 8

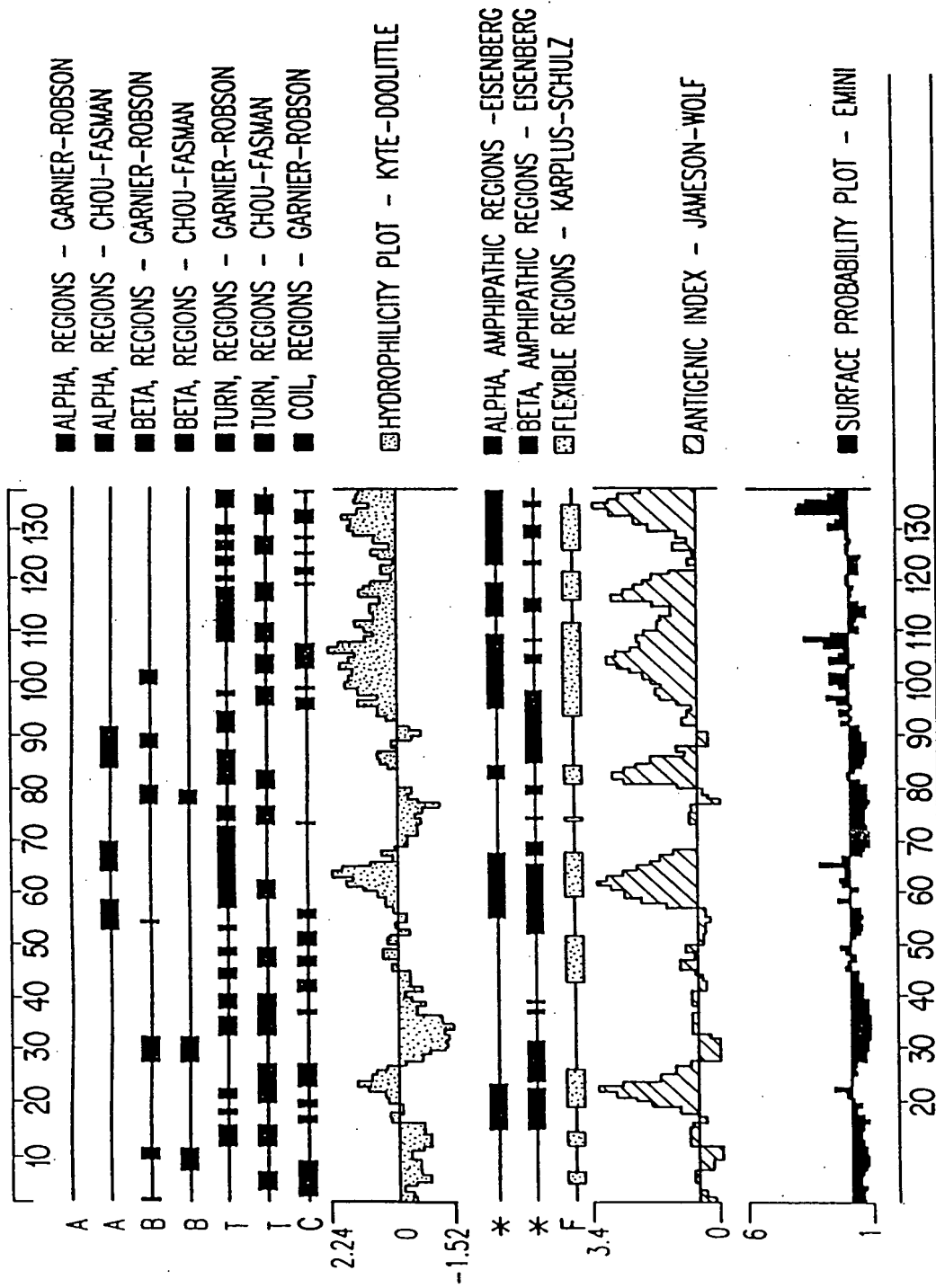


FIG.9

FIG. 10

FIG. 11

1 MEPPGDWGPPPWSTPRTDVLRLVLYLTFLGAPCYAP.....ALPSCK 43
:| :| |. | |..|
 1MLGTSGHLVWLSQGFSLAGRPGSSPWPVDAVLACGWCP 38
 44 EDEYPVGSECCPKCSPGYRVKEACGELTGTVCEPCPPGTYIAHLNGLSKC 93
 :. |. |:: ... |. |.. |: ...||::|. :| ::: ..|
 39 GLHVPPLSPSSWTPAMGLRASRNC SRTENAVCGCSPGHFCI..VQGDHC 86
 94 LQCQMCDPDIGSPCDLRGRGHLEAGAHLSRGRQKGEPDPEVAFESLSAEP 143
 .|. :.. :||: :| |... |... :|.. | ::: :|. |
 87 AACRAYAT..SSPGQRVQKGGTESQDTLCQNCPRGPSLPMGPWRNVSTRP 134
 144 VHAANGSVPLEPHARLSMASAPCGQAGLHLRDRADGTPGGRA. 185
 |
 135 SK..... 136

FIG.12

1GCACGAGCTGCCTCCCGCAGGCGCCACCTGTGTCCCCCAGCG 42
101 TTGCCTGGACAGCTCCTGCCTCAGGCA.GCGCCACCTGTGTGCGCCAGCG 149
43 CCGCTCCACCCAGCAGGCCTGAGCCCCTCTCTGCTGCCAGACACCCCCTG 92
150 CCGCTCCACCCAGCAGGCCTGAGCCCCTCTCTGCTGCCAGACACCCCCTG 199
93 CTGCCCCACT.CTCCTGCTGCTCGGGTCTGAGGCACAGCTTGTACACCG 141
200 CTGCCCCACTACTCCTGCTGCTCGGGTCTGAGGCACAGCTTGTACACCG 249
142 AGGCGGATTCTCTTTCTCTTTCTCTTTCTCTTCTGGCCCACAGCCGCAGC 191
250 AGGCGGATTCTCTTTCTCTTTCTCTTTCTCTTCTGGCCCACAGCCGCAGC 299
192 AATGGCGCTGAGTTCCTCTGCTGGAGTTCATCCTGCTAGCTGGGTCCCCG 241
300 AATGGCGCTGAGTTCCTCTGCTGGAGTTCATCCTGCTAGCTGGGTCCCCG 349
242 AGCTGCCGGTCTGAGCCTGAGGCATGGAGCCTCCTGGAGACTGGGGGCCT 291
350 AGCTGCCGGTCTGAGCCTGAGTCATGGAGCCTCCTGGAGACTGGGGGCCT 399
292 CCTCCCTGGAGATCCACCCCCAAAACCGACGTCTTGAGGCTGGTGCTGTA 341
400 CCTCCCTGGAGATCCACCCCCAGAACCGACGTCTTGAGGCTGGTGCTGTA 449
342 TCTCACCTTCCTGGGAGCCCCCTGCTACGCCCCAGCTCTGCCGTCTGCA 391
450 TCTCACCTTCCTGGGAGCCCCCTGCTACGCCCCAGCTCTGCCGTCTGCA 499
392 AGGAGGACGAGTACCCAGTGGGCTCCGAGTGCTGCCCCAAGTGCAGTCCA 441
500 AGGAGGACGAGTACCCAGTGGGCTCCGAGTGCTGCCCCAAGTGCAGTCCA 549
442 GGTTATCGTGTGAAGGAGGCCTGCGGGGAGCTGACGGGCACAGTGTGTGA 491
550 GGTTATCGTGTGAAGGAGGCCTGCGGGGAGCTGACGGGCACAGTGTGTGA 599

FIG. 13A

```

492 ACCCTGCCCTCCAGGCACCTACATTGCCACCTCAATGGCCTAAGCAAGT 541
    |||||||||||||||||||||||||||||||||||||||||||||||
600 ACCCTGCCCTCCAGGCACCTACATTGCCACCTCAATGGCCTAAGCAAGT 649

542 GTCTGCAGTGCCAAATGTGTGAC..... 564
    |||||||||||||||||||
650 GTCTGCAGTGCCAAATGTGTGACCCAGATATTGGTTCCCCCTGTGACCTC 699

565 .....CCAGCCATGGGCCTGCGCGCGAGCCGGAAGTGTCTC 599
    |||||||||||||||||||||||||||||||||||||||||||
1600 CCCTCCTCTTGGACTCCAGCCATGGGCCTGCGCGCGAGCCGGAAGTGTCTC 1649

600 CAGGACAGAGAACGCCGTGTGTGGTTGCAGCCCAGGCCACTTCTGCATCG 649
    ||||||||||||||||||||||| |||||||||||||||||||||||
1650 CAGGACAGAGAACGCCGTGTGTGGCTGCAGCCCAGGCCACTTCTGCATCG 1699

650 TCCAGGACGGGGACCACTGCGCCGCGTGCCGCGCTTACGCCACCTCCAGC 699
    ||||||||||||||||||||||| |||||||||||||||||||||||
1700 TCCAGGACGGGGACCACTGCGCCGCGTGCCGCGCTTACGCCACCTCCAGC 1749

700 CCGGGCCAGAGGGTGCAGAAGGGAGGCACCGAGAGTCAGGACACCCTGTG 749
    ||||||||||||||||||||||| |||||||||||||||||||||||
1750 CCGGGCCAGAGGGTGCAGAAGGGAGGCACCGAGAGTCAGGACACCCTGTG 1799

750 TCAGAACTGCCCCCGGGGACCTTCTCTCCCAATGGGACCCTGGAGGAAT 799
    ||||||||||||||||||||||| |||||||||||||||||||||||
1800 TCAGAACTGCCCCCGGGGACCTTCTCTCCCAATGGGACCCTGGAGGAAT 1849

800 GTCAGCACCAGACCAAGTG..... 818
    |||||||||||||||||
1850 GTCAGCACCAGACCAATTGGCCTAATCATATGTGTGAAAAGAAGAAAGCC 1899

819 CAGCTGGCTGGTGACGAAGGCCGGAGCTGGG.....ACCAGCAGCTC 860
    || | | ||| ||| | | ||| |
1900 AAGGGGTGAGCACACGGTGGCCCCATCAGGGTTCATGTCCCAGCCGTCA 1949

861 CCACTGGGTATGGTGGTTTCTCTCAGGGAGCCTCGTCATCGTCATTGTTT 910
    || || || || | | | | | | | |
1950 CCTCTTGGAGCTCTGTACCCCAAGCCTGGGAGGTGGCCCCAGAGCTTTT 1999
  
```

FIG.13B

FIG. 13C

1408	CCAGCCCTCCTGGGCCAACCCAGAGG . GCCTTCAGACCCCAGCTGTGTGC	1456
2498	CCAGCCCTCCTGGGCCAACCCAGAGGCCCTTCAGACCCCAGCTGTCTGC	2547
1457	GCGTCTGACTCTTGTGGCCTCAGCAGGACAGGCCCCGGGCACTGCCTCAC	1506
2548	GCGTCTGACTCTTGTGGCCTCAGCAGGACAGGCCCCGGGCACTGCCTCAC	2597
1507	AGCCAAGGCTGGACTGGGTTGGCTGCAGTGTGGTGTGTTAGTGGATACCAC	1556
2598	AGCCAAGGCTGGAATGGGTTGGCTGCAGTGTGGTGTGTTAGTGGATACCAC	2647
1557	ATCGGAAGTGATTTTCT . . AAATTGGATTTGAATTCGGCTCCTGTTTTCT	1604
2648	ATCGGAAGTGATTTTCTAAAAATTGGATTTGAATTCGGAAAAAA	2692

FIG. 13D

```

1 .....GCACGAGCTGCCTCCCGCAGGCGC 24
      | | | | |
701 GTTGCTTCCCTGGGAGATGACCGTCTTCTCCAGCAGAAAGGTTGAAGGTC 750
      | | | | |
25  CACCTGTGTCCCCAGCGCGCTCCACCCAGCAGGCCTGAGCCCCTCTCT 74
      | | | | |
751 CCACCCTGAGCGGCACCCTGGTCACATGCCTGCGTCCAGGAGAGCTGCAG 800
      | | | | |
75  GCTGCCAGACACCCCCTGCTGCCCACTCTCCTGCTGCTCGGGTTCTGAGG 124
      | | | | |
801 GGTGAAGCCTGTGTGCCCCAGATAACCCCTTCCATGGGCCAGACAAAGC 850
      | | | | |
125 CACAGCTTGTACACCGAGGCGGATTCTCTTTCTTTCTTTCTTTCTTCTC 174
      | | | | |
851 CTCATCAGATCTGAGCTTCTGAGGCTCAGGATGGGCCTTCCCAGAAGC 900
      | | | | |
175 TGGCCCA...GCCGCAGCAATGGCGCTGAGTTCCTCTGCTGGAGTT 219
      | | | | |
901 AGGCCCAGAGGGAGGCTGCCTCCAGATCCCCTGTCCCCTGGGGCTGTGGG 950
      | | | | |
220 CATCCTGCTAGCTGGGTTCCCGAGCTGCCGGTCTGAGCCTGAGGCATGGA 269
      | | | | |
951 TGTCCCTGAATGTCAGGGCCATGGGAGGGCCCCTGGGCTTCAGGGGTTGG 1000
      | | | | |
270 GCCTCCTGGAGACTGGGGGCCTCCTC...CTGGAGATCCACCCCCAA 314
      | | | | |
1001 GGAAAGTGAACACTCTGCTCTTTGTCCACCTTCGGGAGGACAACCTTCAA 1050
      | | | | |
315 A.....ACCGACGTCTTGAGGCTGGTGCTGTATCTCACCTTCCTGGGA 357
      | | | | |
1051 ATGCTGACCCTGGGCCCTAACTGACCTGAGACTTCAGAGCTTCTTGGGA 1100
      | | | | |
358 GCCCCCTGCTACGCCCCAGCTCTGCCGTCTGCAAGGAGGACGAGTACCC 407
      | | | | |
1101 GGAGCTGGGGTCCCCAGCGGAGCCTGGGATGGAGCAGGGATGGCTGCCC 1150
      | | | | |
408 AGTGGGCTCCGAGTGCTGCCCAAGTGCAGTCCAGGTTATCGTGTGAAGG 457
      | | | | |
1151 CAGGGAGGGGGCGGTGGGGCCTTCCATCCTGCTCTGCCCTCCTCGTCCTC 1200

```

FIG. 14A

```

458  AGG..CCTGCGGGGAGCTGACGGGCACAGTGTGTGAACCCTGCCCTCCAG 505
      ||  ||  ||  |  |||  |  |  |  |  |  |  |  |  |  |  |
1201  TGGCCCCAGCTCAGTCCTGTCCATCTCCAGCTCTAACCATTGTGGCCCG 1250

506  GCACCTACATTGCCACCTCAATGGCCTAAGCAAGTGTCTGCAGTGCC.. 553
      |||  |  |  ||  |  |  |  |  |  |  |  |  |  |||  |  ||
1251  ACACTGGCTCTCCCTCTACCTTCTGTCCTTGTCTGACACTGGTCTCCCGT 1300

554  .AAATGTGTGACCCAGCCATGGGCCTGCGCGGAGCCGGAAGTGTCCAG 602
      ||  |  |  |  |  |  |  |||  |  |  |  |  |||
1301  GCTCTGGGGTCTCTGCACTGATGGCTGCCTCCCGCTTCTCTCCCTCTCC 1350

603  GACAGAGAACGCCGTGTGTGGTTGCAGCCCAGGCCACTTCTGCATCGTCC 652
      |  |  |  |  ||  |||  |  |  |  |  ||  ||  |  |
1351  CTCTGCCGTCCTGTCTCCTGTGGCCAGTCTCTCCTTGTCTTCTCTCCT 1400

653  AGGACGGGGACCACTGCGCCGCGTGCCGCGCTTACGCCACCTCCAGCCCG 702
      |  |  |  ||  ||  |  |  |  |  |  |  |  ||  |
1401  CCTTCCTTCTCTCCACCTCCCATAGCCGAGCTTGGAAAAGTCAGACAGA 1450

703  GGCCAGAGGGTGCAGAAAGGAGGCACCGAGAGTCAGGACACCCTGTGTCA 752
      |  |||  ||  |||  ||  ||  |  |  |  |||  ||  |
1451  CCTCTGAGGTCTCATCCTGGAGCTGCCACCAGCCCAGCCTCCCTGGGACC 1500

753  GAACTGCCC..CCCGGGGACCTTCTCTCCAATGGGACCCTGGAGG.... 796
      ||  |  |  ||  |||  |||  ||  ||  ||  |||
1501  TGTCTTCACTGCCTGGGGCCCTGGGAGCCAGGGAGGCTCCCTGAGGCTGA 1550

797  .....AATGTCAGCACCAG 810
      |  |  |||
1551  GTGAACACTGGGCGCTGCACCTGCCTCTCCACGTCCTCGGCCCACTCC 1600

811  ACCAAGTGCAGCTGGCTGGTGACGAAGGCCGGAGCTGGGACCAGCAGCTC 860
      ||  |||||||||||||||||||||||  |||||||||||||||||||
1601  CGCAGGTGCAGCTGGCTGGTGACGAAGCCCGGAGCTGGGACCAGCAGCTC 1650

861  CCACTGGGTATGGTGGTTTCTCTCAGGGAGCCTCGTCATCGTCATTGTTT 910
      |||||||||||||||||||||||  |||||||||||||||||||
1651  CCACTGGGTATGGTGGTTTCTCTCAGGGAGCCTCGTCATCGTCATTGTTT 1700

```

FIG.14B

911 GCTCCACAGTTGGCCTAATCATATGTGTGAAAAGAAGAAAGCCAAGGGGT 960
 ||||||||||||||||||||||||||||||||||||||||||||||||||||
 1701 GCTCCACAGTTGGCCTAATCATATGTGTGAAAAGAAGAAAGCCAAGGGGT 1750
 961 GATGTAGTCAAGGTGATCGTCTCCGTCCAG..... 990
 ||||||||||||||||||||||||||||
 1751 GATGTAGTCAAGGTGATCGTCTCCGTCCAGGTATTGATCCTCCTCCCCCT 1800
 991CGGAAAAGACAGGAGGCA 1008
 ||||||||||||||||
 2001 GGCAGGGTCTCCACGATTCGTGTGCTCACAGCGGGAAAAGACAGGAGGCA 2050
 1009 GAAGGTGAGGCCACAGTCATTGAGGCCCTGCAGGCCCTCCGGACGTCAC 1058
 ||||||||||||||||||||||||||||||||||||||||||||||||
 2051 GAAGGTGAGGCCACAGTCATTGAGGCCCTGCAGGCCCTCCGGACGTCAC 2100
 1059 CACGGTGGCCGTGGAGGAGACAATACCCTCATTAC.GGGGAGGAGCCCA 1107
 ||||||||||||||||||||||||||||||||| |||||||||||||
 2101 CACGGTGGCCGTGGAGGAGACAATACCCTCATTACGGGGGAGGAGCCCA 2150
 1108 AACCACTGACCCACAGACTCTGCACCCCGACGCCAGAGATACCTGGAGCG 1157
 ||||||||||||||||||||||||||||||||||||||||||||||||
 2151 AACCACTGACCCACAGACTCTGCACCCCGACGCCAGAGATACCTGGAGCG 2200
 1158 ACGGCTGAATGAAAGAGGCTGTCCACCTGGCGGAACCACCGAGCCCGGA 1207
 ||||||| ||||||||||||||||||||| |||||||||||||
 2201 ACGGCTG.CTGAAAGAGGCTGTCCACCTGGCGAAACCACCGAGCCCGGA 2249
 1208 GGCTTGGGGGCTCCACCCTGGACTGGCTTCCGTCTCC|CCAGTGGAGGGA 1257
 || |||||||||||| ||||| ||||| |||||||||||||||||||||
 2250 GGT|TGGGGGCTCCGCCCTGGGCTGGTTTCCGTCTCCTCCAGTGGAGGGA 2299
 1258 GAGGTGGCGCCCCTGCTGGGGTAGAGCTGGGGACGCCACGTGCCATTCCC 1307
 ||||||| |||||||||||||||||||||||||||||||||||||||||
 2300 GAGGTGGGGCCCCTGCTGGGGTAGAGCTGGGGACGCCACGTGCCATTCCC 2349
 1308 ATGGGCCAGTGAGGGCCTGGGGCCTCTGTTCTGCTGTGGCCTGAGCTCCC 1357
 ||||||||||||||||||||||||||||||||||||||||||||||||
 2350 ATGGGCCAGTGAGGGCCTGGGGCCTCTGTTCTGCTGTGGCCTGAGCTCCC 2399

FIG. 14C

1358	CAGAGTCCTGAGGAGGAGCGCCAGTTGCCCTCGCTCACAGACCACACAC	1407
2400	CAGAGTCCTGAGGAGGAGCGCCAGTTGCCCTCGCTCACAGACCACACAC	2449
1408	CCAGCCCTCCTGGG.CCAACCCAGAGGG.CCTTCAGACCCCAGCTGTGTG	1455
2450	CCAGCCCTCCTGGGTCCAGCCCAGAGGGCCCTTCAGACCCCAGCTGTCTG	2499
1456	CGCGTCTGACTCTTGTGGCCTCAGCAGGACAGGCCCCGGGCACTGCCTCA	1505
2500	CGCGTCTGACTCTTGTGGCCTCAGCAGGACAGGCCCCGGGCACTGCCTTC	2549
1506	CAGCCAAGGCTGGACTGGGTTGGCTGCAGTGTGGTGTTTAGTGGATACCA	1555
2550	AAGCCAAGGCTGGACTGGGTTGGCTGCAGTGTGGTGTTTAGTGGATACCA	2599
1556	CATCGGAAGTGATTTTCTAAATTGGATTGAAATTCGGCTCCTGTTTTCTA	1605
2600	CATCGGAAGTGATTTTCTAAATTGGATTGAAAAAAAAA.....	2637

FIG. 14D


```

1  CCCCTTCTACAGGAAACCCGGAGTGGACTGGAACGGTGCAGGGGAGAA  50
    ||  |  ||||  |||  |  |||  |  |||  |
1  ...AAAGCTCGGGCTCCACCGGGGACGACCGCTCCTAGAAACTGAGTGGT  47

51  CTCGCCCTCCCATCGGGCGCCTCCTTCATACCGGCCCTTCCCCTCGGCT  100
    || |||  ||  |  ||  |||  |  |||  |  |||  ||
48  ATCCCCCGGGCCTGCAGG.AATTCCAACCTGCCTGAAGGGACCCTGCCCT  96

101  TTGCCTGGACAGCTCCTGCCTCAGGCAGCGCCACCTGTGTGCCCAGCGC  150
     |||  |  |  |||  |  |  |||  ||  ||
97  GGAAGTG..ACAGTGCAAGCTCGGCGTCTGCCCATCTGGGAAGAAGGCT  144

151  CGCTCCACCCAGCAGGCCTGAGCCCCTCTCTGCTGCCAGACACCCCCTGC  200
    |||  ||||  ||  |  |||  |||  ||  |||  ||
145  GGTTCCTCCCATCAACGAAGCCCTCCAGGACCTTCCTGCAAGCCCTCGT  194

201  TGCCCACTACTCCTGCTGCTCGGGTTCTGAGGCACAGCTTGTACACCGA  250
    |||  |  ||  |  ||  |  ||  |  |||  |
195  CCCACACGCAGCTCTGCCGTCCCTTGGTGTCCCTCCCGGCCTCA...GGT  241

251  GGCGGATTCTCTTTCTCTTTCTCTTTCTCTTCTGGCCCA.CAGCCGCAGC  299
     ||  ||  |  ||  |  |||  ||||  ||  |  |
242  CCTCCATGCTGGGTACCTCTGGGCACCTCGTTTGGCTGAGCCAGGGGTTC  291

300  AATGGCGCTGAGTTCCTCTGCTGGAGTTCATCCTGCTAGCTGGGTTCCCG  349
    |  |||  ||  ||  ||  |||  ||  |  ||  ||
292  AGCCTGGCAGGGCGCCCTGGCAGCAGTCCTTGGCCTGTGGATGCTGTCCT  341

350  AGCTGCCGGTCTGAGCCTGAGTCATGGAGCCTCCTGGAGACTGGGGGCCT  399
    ||  ||  ||  ||  |  |  ||  ||  ||  ||
342  GGCCTGTGGATGGTGTG.....CCGGCCTCCACGTACCCCCTCTCAGCCC  386

400  CCTCCCTGGAGATCCACCCCCAGAACCGACGTCTTGAGGCTGGTGCTGTA  449
    |  |||  |  ||||  ||  |  |  |  |  |||  |
387  CTCCTCTTGGACTCCAGCCATGGGCCTGCGCGCGAGCCGGAAGTGTCCA  436

450  TCTCACCTTCCTGGGAGCCCCCTGCTACGCCCCAGCTCTGCCG.TCCTGC  498
     ||  |  |  |  |  |  ||  ||  ||  ||  |  |
437  GGACAGAGAACGCCGTGTGTGGCTGCAGCCAGGCCACTTCTGCATCGTC  486

```

FIG.15A

499 AAGGAGGACGAGTACCCAGTGGGCTCCGAGTGCTGCCCCAAGTGCAGTCC 548
 |||| | || || | | | | | | | | |
 487 CAGGACGGGGACCACTGCGCCGCGTGCCGCGCTTACGCCACCTCCAGCCC 536
 549 AGGTTATCGTGTGAAGGAGGCCTGCGGGGAGCTGACGGGCACAGTGTGTG 598
 || | | ||| || ||| || ||| || | ||| |||||
 537 GGGCCAGAGGGTGCAGAAGGGAGGCACCGAGAGTCAGGACACCCTGTGTC 586
 599 AACCTGCCCTCCAGGCACCTACATTGCCACCTCAATGGCCTAAGCAAG 648
 | ||||| | || | | | |||| | | | |
 587 AGAACTGCCCCCGGGGACCTT..CTCTCCAATGGGACCCTGGAGGAATG 634
 649 TGTCTGCAGTGCCAAATGTGTGACCCAGATATTGGTTCCCCCTGTGACCT 698
 | | | |||| | |||| || | || | ||||| |||
 635 TCAGCACCAGACCAAGTAAGTGAACCCGGGGGAGGCCAGCTCTGTGCCCT 684
 699 CAGGGGAAGAGGTCACCTGGAGGCTGGTGCCACCTGAGTCCAGGCAGAC 748
 || | | ||| | | | | | ||| | |
 685 GGGGAGGGGGCTCCACGTTGCTTCCCTGGGAGATGACCGTCTTCTCCAGC 734
 749 AGAAAGG.....GGAACCAGACCCAGAGGTGGCCTTTGAGTCACTGAGCG 793
 ||||| || ||| | || || ||| |||
 735 AGAAAGGTTGAAGGTCCACCCCTGAGCGGCACCCTGGTCACATGCCTGCG 784
 794 CAGAGCCTGTCCATGCGGCAACGGCTCTGTCCCCTTGGAGCCTCATGCC 843
 || | || || ||| || | ||| |||
 785 TCCAGGAGAGCTGCAGGGTGAAGCCTGTGTGCCCCAGATAACCCCTTCCA 834
 844 AGGCTCAGCATGGCCAGTGCTCCCTGCGGCCAGGCAGGACTGCACCTGCG 893
 || | | || || | | | | | ||| |
 835 TGGGCCCAGACAAAGCCTCATCAGATCTGAGCTTCCTGGAGGCTCAGGAT 884
 894 GGACAGGGCTGACGGCACACCTGGGGGCAGGGCCTGAGCCTACAGGGAGG 943
 || | | || || ||| || | ||| |
 885 GGGCCTTCCCAGAAGCAGGCCAGAGGGAGGCTGCCTCCAGATCCCCTGT 934
 944 CACAGGGCAGGTGGGCTAGCCATGAACAGAAGAGGAAGCTGGAGTGCTTT 993
 | | || || | || |||| || | | | | |
 935 CCCCTGGGGCTGTGGGTGTCCCTGAATGTCAGGGCCATGGGAGGGCCCCT 984

FIG.15B

994 GGGGGTTCATGCATGTAGGCTGGGATTTGGGGCTCACACCTCAACCTGCA 1043
 ||| | | | | | | | | | | | | | | |
 985 GGGCTTCAGGGGTTGGGGAAAGTGAACACTCTGCTCTTTGTCCACCTTCG 1034
 1044 TGCCCAGTTCCATGCCCCTCCCCTCTTGTGAAAGCACCTGTCTACTTGGG 1093
 | | | | | | | | | | | | | | | | | |
 1035 GGAGGACAACCTTCAAATGCTGACCCTGGGCCCCTAACT.....GA 1075
 1094 CTGAGGATGTGGGGGCACAGGTGGCAGGTGAGGCTGCCCTCAGGAGGGGC 1143
 | | | | | | | | | | | | | | | | | |
 1076 CCTGAGACTTCAGAGCTTCTTGGGAGGAGCTGGGGTCCCCCAGCGGAGCC 1125
 1144 CCAGGCCCAGCTTGTACCCACCTCCACCAGTACCTGAAGAAGTGGGGCT 1193
 | | | | | | | | | | | | | | | | | |
 1126 TGGGATGGAGCAGGGATGGCTGCCCA.....GGGAGGGGGCGGTGG 1167
 1194 CTCACCCTACCTGCCTCTGCCATTGGAATGGCCTGGTTTGCACAGATGGG 1243
 | | | | | | | | | | | | | | | | | |
 1168 GGCCTTCCATCCTGCTCTGCCCTCCTCGTCTCTGGCCCCAGCTCAGTCC 1217
 1244 AAACCCGTTTGAAGGGTGGGTGTCTGGGTGGGCACGTGGGGCGAGGACCT 1293
 || | | | | | | | | | | | | | | | |
 1218 TGTCCATCTCCAGCTCTAACCATTTGTGGCCCGACACTGGCTCTCCCTCT 1267
 1294 GCCTGAGGGACCCTGCCCTGGAAGTACAGTGCAAGCTCGGCGTCCTGCC 1343
 ||| | | | | | | | | | | | | | | |
 1268 ACCTTCTGTCTTGTCTGACACTGGTCTCCCGTGCTCTGGGGTCTCTGCA 1317
 1344 CATCTGGGCAGAAGGCTGGTTTCTCCCATCAACGAAGCCCTCCAGGACC 1393
 | ||| | | | | | | | | | | | | | |
 1318 CTGATGGCTGCCTCCCGCTTCTCTCCCTCTCCCTCTGCCGTCTGTCTC 1367
 1394 TTCCTGCAAGCCCTCGTCCCACACGCAGCTCTGCCGTCCCTTGGTGTCCC 1443
 | ||| | | | | | | | | | | | | | |
 1368 CTGTGGCCAGTCTCTCCTTGTCTCTCTCTCCTCCTTCTCTCTCCACC 1417
 1444 TCCCGGCCTCAGGTCCTCCA....TGCTGGGTACCTCTGGGCACCTCGTT 1489
 ||| | | | | | | | | | | | | | | |
 1418 TCCCATAGCCGAGCTTGGAAAAGTCAGACAGACCTCTGAGGTCTCATCC 1467

FIG.15C

1490 TGGCTGAGCCAGGGGTTTCAGCCTGGCAGGGCGCCCTGGCAGCAGTCCTTG 1539
 ||| |||| | ||||| | ||| | | | |
 1468 TGGAGCTGCCACCAGCCCAGCCTCCCTGGGACCTGTCTTCACTGCCTGGG 1517
 1540 GCCTGTGGATGCTGTCCTGGCCTGTG.GATGGTGTCCCGCCCTCCACGTA 1588
 ||| ||| | | | | | | | | | |
 1518 GCCCTGGGAGCCAGGGAGGCTCCCTGAGGCTGAGTGAACACTGGGCGCTG 1567
 1589 CCCCTCTACCCCCTCCTCTTGGA CTCCAGCCATGGGCCTGCGCGCGAGC 1638
 | ||| | | ||| | ||| | | ||| | | |||
 1568 CACCTGCCTCTCCACGTCCTCGGCCCA.....CTCCCGC 1603
 1639 CGGAAGTGTCCAGGACAGAGAACGCCGTGTGTGGCTGCAGCCCAGGCCA 1688
 || | ||| | ||| ||| ||| |||| |||
 1604 AGGTGCAGCTGGCTGGTGACGAAGCCCGGAGCTGGGACCAGCAGCTCCCA 1653
 1689 CTTCTGCATCGTCCAGGACGGGGACCACTGCGCCGCGTGCCGCGCTTACG 1738
 || | | | | | | | | | | |
 1654 CTGGGTATGGTGGTTTCTCTCAGGGAGCCTCGTCATCGTCATTGTTTGCT 1703
 1739 CCACCTCCAGCCCGGGCCAGAGGGTGCAGAAGGGAGGCACCGAGAGTCAG 1788
 |||| ||| | ||| ||| ||| | ||| |
 1704 CCACAGTTGGCCTAATCATATGTGTGAAAAGAAGAAAGCCAAGGGGTGAT 1753
 1789 GACACCCTGTGTCAGAACTGCCCCCGG...GGACCTTCTCTCCAATGG 1835
 | | | | ||| ||| ||| ||| ||| |||
 1754 GTAGTCAAGGTGATCGTCTCCGTCCAGGTATTGATCCTCCTCCCCCTCTC 1803
 1836 GACCCTGGAGGAATGTCAGCACCAGACCAATTGGCCTAATCATATGTGTG 1885
 || | | |||| || | | ||||
 1804 CCTCCCCCTCCACCTTCCACCTCCCCTCTCCCCGCTGGGGCTGGTGTT 1853
 1886 AAAAGAAGAAAGCCAAGGGG...TGAGCACACGGTGGCCCCATCAGGGTT 1932
 | | | |||| || | | | | |||
 1854 TCTGGTGTACATGGTGGGGGCTCCAGTTCTCTGAGGGTCCTGAGTCTTT 1903
 1933 CATGTCCCCAGCCGTACCTCTTGAGCTCTGTACCCCAAGCCTGGGAG 1982
 || || | || | ||| | | | |||| || |
 1904 CAAGTACAGCCACGGTAGCTCAGGAA.....AGAACCCACCCCTCAA 1947

FIG.15D

FIG. 15E

2481 GCTCACAGACCACACACCCAGCCCTCCTGGG.CCAACCCAGAGGCCCTT 2529
|||||
2433 GCTCACAGACCACACACCCAGCCCTCCTGGGTCCAGCCCAGAGGGCCCTT 2482
2530 CAGACCCCAGCTGTCTGCGCGTCTGACTCTTGTGGCCTCAGCAGGACAGG 2579
|||||
2483 CAGACCCCAGCTGTCTGCGCGTCTGACTCTTGTGGCCTCAGCAGGACAGG 2532
2580 CCCCAGGCACTGCCTCACAGCCAAGGCTGGAATGGGTTGGCTGCAGTGTG 2629
|||||
2533 CCCCAGGCACTGCCTTCAAGCCAAGGCTGGACTGGGTTGGCTGCAGTGTG 2582
2630 GTGTTTAGTGGATACCACATCGGAAGTGATTTTCTAAAAATTGGATTTGA 2679
|||||
2583 GTGTTTAGTGGATACCACATCGGAAGTGATTTTCTAAA.....TTGG 2624
2680 ATTCGGAAAAAAA 2692
|||
2625 ATTTGAAAAAAA 2637

FIG.15F

TNFR-I	V	C	PQGYIHPQNN	S	I	C	TK	C	HKGTYLYND	C	PGPGQD	C	R
TNFR-II	T	C	RLREYYDQTAQM			C	SK	C	SPGQHAKVF	C	TKTSDTV	C	D
CD40	A	C	REKQYLINSQ			C	SL	C	QPGQKLVS	C	TEPTETE	C	L
4-1BB	-					-	SN	C	PAGTF	C	DNNRNQI	C	S
TR-2	S	C	KEDEYVPGSE			C	PK	C	SPGYRVEA	C	GELTGTV	C	E

TNFR-I	E	C	ESGSFTASENHLRH			C	LS	C	SK	C	RVDRD	C	G
TNFR-II	S	C	EDSTYTQLWNWPE			C	LS	C	CSR	C	TREQNRI	C	T
CD40	P	C	GESEFLDTWRETH			C	HQ	H	KY	C	TSETDTI	C	T
4-1BB	P	C	PPNSFSSAGGQRT			C	DI	C	RQ	C	SSTSNAE	C	D
TR-2	P	C	PPGTYTAHLNGLSK			C	LQ	C	QM	C	SRTENAV	C	G

TNFR-I	C	R	KNQRYRHWSENLFQ			C	FN	C	SL	C	QEKQNTV	C	T
TNFR-II	C	R	PGWY	C	ALSKQEG	C	RL	C	APLRK	C	TETSDWV	C	K
CD40	C	E	EGWH	C	TSEA	C	ES	C	VLHRS	C	VSDTI	C	E
4-1BB	C	T	PGFH	C	LGAG	C	SM	C	EQD	C	KD	C	-
TR-2	C	S	PGHF	C	IVQDGDH	C	AA	C	RAYAT	S	SPGQRVQKG	G	TESQDTL

TNFR-I	-	C	HAGFFLRENE			C	VS	C	SN	C	TKL	C	L
TNFR-II	P	C	APGTFSTNTSSDI			C	RP	H	QI	C	NASMDAV	C	T
CD40	P	C	PVGFFSNVSSAFEK			C	HP	W	TS	C	TNKTDWV	C	G
4-1BB	-	C	F-GTFNKQKRG			C	RP	W	TN	C	TKERD	C	G
TR-2	N	C	PPGTFSPNGTLEE			C	QH	Q	TK	C	AGTSSSH	W	V

FIG.16